

**Before the  
Federal Communications Commission  
Washington, D.C.**

<b>In the Matter of</b>	)	
	)	
<b>Petition for Rulemaking to Allow the MA3</b>	)	<b>MB RM-11836</b>
<b>All-Digital Mode of HD Radio for AM Stations</b>	)	
	)	
<b>Revitalization of the AM Radio Service</b>	)	
	)	

**Comments of Cavell, Mertz & Associates, Inc.**

The consulting firm of Cavell, Mertz & Associates, Inc. (“Cavell Mertz”) submits these comments in support of the March 2019 “Petition for Rulemaking to Further AM Revitalization” (“Petition”) in which Bryan Broadcasting Corporation (“BBC”) requested the Federal Communications Commission (“FCC” or “Commission”) to initiate a proceeding to authorize the MA3 all-digital mode of HD radio for any AM Station electing to employ that method as an optional mode in lieu of analog transmission.

Cavell Mertz has reviewed the Petition and herein expresses its support for the BBC’s proposals, as outlined in the Petition, and for the Commission’s further efforts in revitalizing the AM broadcast band radio service.

Cavell Mertz is particularly qualified to comment in this matter in that it and its predecessor firms have provided consulting engineering services to the licensees of AM radio stations across the nation since 1989. Additionally, Cavell Mertz has also participated in numerous research activities<sup>1,2</sup> supporting AM improvement and the use of MA1 and MA3 transmissions for AM radio. In particular, Cavell Mertz designed, constructed, operates and hosts the NAB’s “Pilot Radio Test Bed” (digital radio laboratory), and participated in numerous measurement and observation activities around the country investigating and characterizing MA3 day and night service. Further, Cavell Mertz supported the development of, and assisted in the preparation of the authorization request for, the presently operating WWFD MA3 experimental facility in Frederick, Maryland (see FCC File Number BSTA-20180628AAI). We therefore

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<sup>1</sup> *NAB Labs All-digital AM Test Project*, 2015 NAB Broadcast Engineering Conference Proceedings, April 2015, pp. 19-44

<sup>2</sup> *NAB Labs All-digital AM Test Project – Part II, Cochannel Laboratory Test Results*, 2016 NAB Broadcast Engineering Conference Proceedings, April 2016, pp. 50-68

believe that the aggregate firm experience, along with that of its individual participants, provides a useful further perspective and resource in the discussion of AM broadcast band quality improvement, and specifically the use of MA3 digital modulation techniques for AM radio.

Cavell Mertz believes that AM radio stations can continue to be relied upon to provide needed service well into the future, but not without some relief from the ever increasing electrical noise floor in the medium wave band and a measure of improvement in received audio quality. Our experience in the various AM-digital tests leads us to the conclusion that technology has advanced to the point where this is now an achievable goal using presently available all-digital MA3 AM transmission methods. Further, based upon laboratory and real world testing, the MA3 approach was found to occupy less spectrum bandwidth than the presently authorized Hybrid AM IBOC mode. For the foregoing reasons, we strongly support the BBC Petition.

We also feel that concerns over the impact of using a new mode should diminish over time as more (already in the marketplace) compatible radio receivers are becoming increasingly available. Further, in many instances, AM stations employ companion analog FM translators, which provide an alternative means for receiving station programming. Finally, given that broadcasting is a mature service with many existing voices for a listener to select from, and other audio service means continue to evolve and become available, we feel that the implementation of an optional medium wave band all-digital mode would not create a material loss of service for the Public. Nevertheless, every broadcaster's listener service goals and business plans are unique, therefore we also support BBC's recommendation that the all-digital mode be an option for AM broadcasters, allowing them to implement all-digital AM transmissions as they see fit based upon their knowledge of their individual communities.

Respectfully Submitted,

By:



Garrison C. Cavell

On behalf of

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May 10, 2019